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# ***JPRS Report—***

# **Epidemiology**

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# Epidemiology

JPRS-TEP-91-005

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## ANGOLA

### Work at Cabinda Military Hospital Described

91WE0185A Luanda JORNAL DE ANGOLA  
in Portuguese 28 Dec 90 p 3

[Article by Andre Guto and Joao Mavinga: "Cabinda Military Hospital Guarantees High Level of Treatment"]

[Excerpt] The Military Hospital of the Independent [Military] Zone of Cabinda has treated about 2,072 outpatients with various ailments in the last 12 months, Major Kanga Rodrigues ("Bafua Bafua") reported in an interview with O JORNAL in this city.

According to "Bafua Bafua," the high incidence of the most common ailments in Cabinda Province may be laid to weather conditions, the unsanitary environment, and the intensity of the military action.

To combat the ailments most commonly seen among the combatants, the Military Hospital of the Independent Zone of Cabinda carried out the "PHAE" [expansion not given] vaccination campaign plan of the SAMM [Military Medical Assistance Services] of Cabinda.

It is noted that, in the first half of this year, the hospital administered three types of vaccines, for a total of 3,151 vaccinations: 2,104 against typhoid fever; 1,016 against tetanus; and 21 against yellow fever.

According to our interviewee, during the year about 3,600 patients were treated for the more common ailments, specifically: malaria (1,958 cases); acute respiratory ailments (761 cases); wounds (581 cases); acute diarrhea and intestinal parasites (166 cases); venereal diseases (77 cases); and pulmonary tuberculosis (57 cases).

The hospital has a 60-bed capacity and currently has 53 beds available. Regarding the patients' diet, the official stressed that it could be considered excellent, because there is an assured supply of beef, chicken, fresh fish, and vegetables in the province.

At another point, Maj. Kanga Rodrigues said the hospital receives 70 percent of its monthly supply of medicine from the medical supply warehouse of the Independent Military Zone of Cabinda, in addition to extra supplies.

The hospital supervises about 20 medical posts throughout Cabinda Province. Its staff includes three Angolan physicians, one cooperant, four medical technicians, 25 nurses, and 55 health instructors.

With regard to services, the hospital has units for physical therapy, dentistry, surgery, orthopedics, and medicine, an emergency room, and units for clinical analyses and radiology; there are also plans to install a surgery wing and a recovery room.

According to the speaker, among the problems confronting the hospital which he directs is the lack of potable water. Another problem is that the material from "Siemens" for maintenance of the X-ray equipment, which has been expected for more than a year, has not yet arrived in the province, with great detriment to the functioning of the hospital.

He looked forward to the hospitals' move to new facilities. The Teixeira Duarte company is the contractor for the construction and for the acquisition of certain equipment; namely, crockery, hospital furniture, washing machines, and driers. [passage omitted]

### Number of Tuberculosis Cases Rising

91WE0185B Luanda JORNAL DE ANGOLA  
in Portuguese 28 Dec 90 p 3

[Text] Jorge Emanuel Dupret, national director of endemic diseases, said yesterday in Luanda that 6,412 cases of tuberculosis had been reported in Angola in the third quarter of 1990.

Speaking with the Angolan news agency ANGOP, Jorge Dupret said that "by the end of this year we will have more than 11,000 new cases of pulmonary tuberculosis, an increase of about 20 percent over last year."

Because the health system has been cut back by 40 percent, the endemic disease services do not cover all areas of the country and the total number of new cases this year is estimated at about 18,000, he added.

Also during this period, said the national director of endemic diseases, 1,234 new cases of trypanosomiasis (sleeping sickness) were reported, as against 555 new cases in 1989.

According to the official, the situation has worsened alarmingly, "so we are actively searching out and treating cases of trypanosomiasis, using mobile teams."

### Children in Luanda Die of Malnutrition

MB0202170391 Luanda ANGOP in Portuguese  
1915 GMT 31 Jan 91

[Excerpt] Luanda, 31 Jan (ANGOP)—ANGOP learned from a reliable source today that 141 children in Luanda died of malnutrition last December. The source added that malnutrition is caused by inadequate nutrition due to the poor living conditions experienced by some families. Also in December, 75 children died of diseases such as measles, meningitis, tetanus, and so on. [passage omitted]

### Cholera, Measles Kill 100 Children

MB0402094091 ANGOP in Portuguese 0700 GMT  
3 Feb 91

[Excerpt] ANGOP has learned from a source in the Health Ministry that cholera and measles have killed

more than 100 children in Lucira, Namibe Province, between October 1990 and January 1991.

This situation has been caused by a lack of potable water and poor hygiene conditions. The source also disclosed that the number of deaths may increase because the local health authorities only have two doctors for some 60,000 people. [passage omitted]

## MAURITIUS

### Seven Cases Reported in Typhoid 'Epidemic'

*91P40137A Port Louis L'EXPRESS in French  
6 Jan 91 p 1*

[Text] Since the end of last year, the beginning of a typhoid epidemic has been recorded in Rodrigues. According to information gathered from informed sources, the Ministry of Health has recorded seven cases of typhoid fever on the island.

Deputy Prime Minister and Minister of Health Dr. Prem Nababsing confirmed the information: "As of today we have counted seven cases of typhoid fever that have been treated. There are still three cases under observation at the hospital in Rodrigues." Three of those infected are children.

## MOZAMBIQUE

### Cholera Kills 8 People in Macuze, Zambezia Province

*MB0402095291 Maputo Domestic Service in Portuguese  
0500 GMT 3 Jan 91*

[Text] A total of 48 cholera cases and eight deaths have been recorded in Macuze, in Zambezia Province.

Radio Mozambique's Quelimane correspondent did not specify when those deaths occurred but reported that health authorities are working to bring the epidemic under control.

## NIGER

### Measles, Meningitis Reported in Dosso

*AB2302215491 Niamey Domestic Service in French  
1900 GMT 19 Feb 91*

[Excerpt] There has been an outbreak of measles and meningitis in Dosso. According to the Dosso central health official, from 1 January to 15 February, about 904 cases of measles were recorded in various medical centers, including about 30 deaths. The zone suffering most from the disease is Gaya.

As for meningitis, a contagious disease with symptoms of headache and fever, the first cases were recorded in the Boutchi [as heard] region last December. About 300

cases were recorded, with death occurring in 25 to 30 percent of the cases. [passage omitted]

## NIGERIA

### 'Unidentified' Epidemic Kills 36 in Kaduna

*AB0302092691 Lagos Domestic Service in English  
2100 GMT 2 Feb 91*

[Text] In Kaduna State, 36 people have been confirmed dead following the outbreak of an unidentified epidemic in Maramba Rido, in the Chikum local government area. As a result, Governor Tanku Ayuba has directed the commissioner for health to mobilize her staff for house-to-house immunization of the people to prevent further spread of the disease. Colonel Ayuba, who has personally assessed the situation during a visit to the area, also ordered the procurement of drugs for on-the-spot treatment of victims. He promised that a borehole would be sunk in the area as a way of finding a solution to the perennial water shortage.

Briefing the governor earlier, the commissioner for health, Mrs. Sarah Hasan, said a number of measures had already been taken to check the spread of the disease. She, however, explained that the disease had not been properly identified because it exhibited both the symptoms of yellow fever and cerebral-spinal meningitis.

### Babangida Speaks on Malaria Deaths

*AB2002210891 Dakar PANA in English 1805 GMT  
20 Feb*

[Text] Lagos, 20 Feb. (NAN/PANA)—About 100,000 Nigerians, mainly children, die of malaria annually in spite of government's efforts to attain its set objectives of health for all by the year 2000, President Ibrahim Babangida, said in Lagos on Tuesday.

The president made the disclosure in a message he sent to the opening of an international conference on "Health Research Priorities for Nigeria in the 1990s and Strategies for their Sustained Achievement".

Diseases, such as diarrhea, dysentery, tuberculosis, leprosy and typhoid, still ravage our people in spite of the heroic efforts of government through the research community," Babangida said in the message, read on his behalf by the minister of health, Prof. Olukoye Ransome Kuti.

Babangida expressed his government's commitment to invest in research projects as a means of realising the set objective of health for all.

Earlier, the minister of science and technology, Prof. Gordian Ezedkwe, urged the conference to examine the entire spectrum of health problems in the country and make adequate recommendations. He commended the National Institute for Medical Research (NIMR) for the

role it had been playing in the health sector, adding that the conference was timely because of its focus on health research.

The five-day conference is designed to map out the priority areas for essential health research and to define the cost implications of the research programmes as well as suggest funding sources.

## SENEGAL

### Presence of Swine Fever in Oussouye

91WE0168E Dakar LE SOLEIL in French  
22 Nov 90 p 7

[Text] Ziguinchor (APS) [Senegalese Press Agency]—The chief of the regional animal husbandry service confirmed on 19 November that cases of swine fever have been found in the Department of Oussouye during the past two years. He made this statement at the CRD [Regional Development Commission]. The official of the animal husbandry service said: "However, this viral infection of pigs has been found everywhere in Africa, and there is not yet any treatment or vaccine for it."

It is reported that the fever is similar to other animal infections. However, in Oussouye samples showed that 90 percent, or 5,000 pigs, carried the virus of African swine fever. Veterinary laboratories in Dakar and Nairobi (Kenya) have been informed of the situation by Senegalese authorities and are now carrying on research aimed at finding an answer to it.

It appears that the only vaccine against swine fever, developed in the United States, is "considered ineffective" on the pigs inoculated with it in Oussouye, it has been learned.

Until laboratory research has been completed, only the symptoms are being treated on the ground in dealing with the disease. At present the only course of action recommended by veterinary circles is focusing on prevention and monitoring the movement of the animals.

## SWAZILAND

### New Strain of Gonorrhoea Detected

91WE0156A Johannesburg THE CITIZEN in English  
19 Dec 90 p 10

[Text] Mbabane—A report by a medical survey team, which studied the prevalence of AIDS and other sexually transmitted diseases in Swaziland, said the survey had discovered a new strain of the most common venereal disease, gonorrhoea, which is resistant to all known curative drugs.

The team's leader, Dr. Frank Guiness, said at best normal drugs provided only a temporary cure after which the disease symptoms flared up again and persisted.

Dr. Guiness said equally alarming was the finding that Swaziland, whose population was about 700,000, reported some 50,000 cases of sexually transmitted diseases in the government hospitals alone since January this year.

He said in other countries campaigns to publicise the importance of using condoms had reduced the number of sexually transmitted diseases but in Swaziland there was no such reduction.

### Hospitals Report 50 Malaria Cases in January

MB0402125391 Mbabane THE TIMES OF SWAZILAND in English 4 Feb 91 p 27

[Report by Vusie Ginindza: "50 Caught Malaria"]

[Text] A total of 50 people have contracted malaria this month, the malaria control officer, Mr. Simon Kunene has said.

Mr. Kunene said that 26 of the victims were diagnosed in clinics and hospitals around the country and the rest were handled by the malaria control team.

Mr. Kunene said this was a great improvement on the control of the disease compared to the same period last year.

"Hospitals and clinics last year in January recorded 36 cases. The Malaria team came up with 56, bringing the total number to 92. This indicates a difference of 42," he said.

Mr. Kunene however warned that the worst period for malaria was still to come, with the heavy rains and high temperatures that are typical of the weather presently.

"Such conditions provide an excellent breeding ground for mosquitoes. Under such conditions, we are expecting a drastic mosquito population boom," he said.

Mr. Kunene warned members of the public to report to hospital immediately when they feel the initial symptoms of malaria.

"This is very important because otherwise the disease spreading mosquitoes will infect other people, very fast," he said.

Mr. Kunene said the general symptoms of the disease are a loss of appetite, headaches and high body temperature.

## TANZANIA

### Plague Claims Eight Lives in Lushoto District

EA1702194291 Dar es Salaam Domestic Service  
in Swahili 1900 GMT 16 Feb 91

[Excerpts] Dar es Salaam—Comrade Wilfred Mwabulambo, principal secretary of the Ministry of Health, said there have been 127 new cases of the plague resulting in eight deaths in Lushoto District between 1 and 12

February. [passage omitted] The principal secretary said that efforts to eradicate the disease would continue by spraying poison on rats and insecticide on fleas as well as through researching the plague. [passage omitted]

### More Casualties Reported in Cholera Outbreak

*EA2102213291 Dar es Salaam Domestic Service in Swahili 1000 GMT 21 Feb 91*

[Text] Kimamba—More than 54 people in Morogoro Region have died of cholera, which broke out at the end of January this year. The deputy medical officer of health of Morogoro Region, Dr. Venasi Mkungu, has admitted that the disease is spreading rapidly in Kilosa District, particularly in some of its villages such as Kimamaba village where up to now 38 cases have been reported and (Msowelo) where there are 10. Dr. Mkungu called on the citizens in the region to avoid dirt in the environment by keeping their areas clean, including their drinking water, so as to contain the disease.

## ZAMBIA

### Anthrax Outbreak Kills People, Animals

#### Deaths in Sinjembela

*91WE0199 Lusaka TIMES OF ZAMBIA in English 27 Dec 90 p 1*

[Text] Fourteen people have died of anthrax in Sinjembela constituency, in Western Province, Parliament learnt yesterday.

Prime Minister General Malimba Masheke, who just returned from a visit to the region, said he visited 14 funerals with veterinary experts during a tour of affected areas.

He was speaking on a point of order when disagreeing with Sinjembela MP Mr. Albert Limbo who, in contributing to the estimates for Ministry of Agriculture debate, complained that people were being stopped from even drinking milk from affected animals.

Deputy speaker Mr. Leonard Kombe, noting that anthrax was a very dangerous disease, necessitating measures taken by the veterinary department, corrected Mr. Limbo and asked him to withdraw the remarks.

Femba MP Mr. Aaron Chonya warned that there would be "no meat in the country" if corridor disease outbreaks in Southern Province were not contained.

Winding up debate Minister Cde Biggie Nkumbula said 99,800 anthrax vaccine doses had by December 19 been administered because of outbreaks noted in Senanga, Mongu, Lukulu and areas of North-Western Province.

The movement of cattle to and from areas where cattle had been vaccinated had been banned and MPs should warn people against eating meat of an animal that had died on its own.

Drinking milk of such diseased animals was also dangerous.

Local anthrax vaccine production was soon to be realised following intensive research at the central veterinary research institute which would produce other vaccines.

Mr. Nkumbula also begged the House to carry out a thorough investigation on the current situation regarding the zone initially aimed at curbing pneumonia which was endemic in Angola.

The MP said the zone posed a security risk and should be relocated at the border area as in the past MPLA troops destroyed much property in Zambia believing the zone marked a borderline.

#### Nine Deaths in Litoya

*91WE0199 Lusaka TIMES OF ZAMBIA in English 21 Dec 90 p 2*

[Text] Nine people have died of anthrax in Litoya area of Senanga district, Western Province veterinary officer Dr Rob de Rooij confirmed yesterday.

Dr. Rooij said he had received reports in connection with the death of nine men in the area.

The deaths come in the wake of reports that 15 men were admitted in Mongu general hospital last Sunday after eating meat suspected to be infected with anthrax.

Recently, there was another outbreak of anthrax in Zambezi in which four people died, several hospitalised and a number of animals perished.

In the latest development, Dr. Rooij said in addition to the loss of human life in Senanga, there were unconfirmed reports that some domestic animals like cats and dogs also died after eating meat suspected to have been contaminated.

He said because of the seriousness of the situation, both Western Province medical officer, Dr. Chitwa Chimbini and provincial livestock officer, Cde. John Zimba have been rushed to the area for an on-the-spot investigation.

The provincial veterinary officer also confirmed that two other people died from the same disease in Kalabo district. The entire province has lost about 100 herds of cattle since the outbreak of the disease.

Dr. de Rooij also disclosed that his office received about 60,000 doses of medicines from Lusaka last night and that his men are being dispatched for a massive campaign of vaccinating cattle in all the affected areas.

#### Bovine Pneumonia Also Noted

*91WE0199 Lusaka TIMES OF ZAMBIA in English 12 Dec 90 p 7*

[Text] Movements of cattle to and from Zambezi have been banned and slaughter of animals in Chief Mpindi

and Chitokoloki in North-Western Province is prohibited, Agriculture Minister Cde Biggie Nkumbula said in Parliament.

In a ministerial statement on anthrax outbreak in Zambezi, the minister said 12,000 doses of vaccine were administered to cattle on November 17 by the Veterinary Institute for Research of Balmoral with another 5,127 animals vaccinated on December 1.

On December 5 another 23,000 doses were administered following an outbreak that killed four people and 40 animals. A total of 57 animals have died from anthrax.

The first two animals to die were from Lukulu and taken to Bucheka where they died. A veterinary team was vaccinating animals all the way from Bucheka to Zambezi.

A six-metre wide buffer zone stretching from Sinjembela to Mwinilunga, Kabompo and Zambezi has been created in which a mobile laboratory team regularly tested animals.

Any diseased animal in that area found unvaccinated was destroyed.

Contagious bovine plurally pneumonia had broken out too and the ministry was trying to curb it.

The ministry was looking into new methods of immunisation against east coast fever in the Eastern Province.

### Reporting on Spread of Cholera Outbreak

#### One Central Province Death

91WE0200 Lusaka TIMES OF ZAMBIA in English  
4 Jan 91 p 1

[Excerpt] A four-year-old girl died from suspected cholera on arrival at the Railway surgery in Kabwe yesterday.

Medical authorities at the clinic gave the name of the dead child as Faides Lungu.

A Zana reporter on the scene was told by nurses and clinical officers that Faides was taken there after receiving treatment at a private surgery in the town centre earlier in the day, but her condition became serious at home.

The body was taken to Kabwe General Hospital mortuary.

The Railway surgery is not one of the clinics designated as cholera centre.

Meanwhile, the district has recorded three more suspected cholera cases bringing the total number of 14, since the deadly disease broke out in the area two weeks ago.

A spokesman for the Central Province medical office confirmed yesterday that a woman and two men were confined on Wednesday to Kasavasa Urban clinic 20 kilometres south of Kabwe.

There are six patients at Kabwe General Hospital, six at Bwacha centre and one each at Ngungu and Kasavasa centres.

The spokesman explained that one of the victims attended a funeral in Makululu township and became sick on his way back to the farm in Kasavasa.

Out-going provincial permanent secretary, Mr. Khama Maimbo said he was told on Monday of four new cases of cholera admitted to Bwacha centre.

Meanwhile, most members of the Chingola district cholera task force walk to areas where they are assigned to conduct health education talks because of lack of vehicles.

As a result the district cholera surveillance committee may fail in its efforts to prevent the spread of deadly disease to the area.

Chingola district chief health inspector, Mr. Godfrey Siandele, expressed this fear at a meeting convened to map out measures against cholera.

Mr. Siandele told the meeting, chaired by the district medical officer Dr. Grijilal Saxena, that apart from transport and fuel, the task force urgently needed at least three refuse collecting trucks to remove garbage which is littered in most of the townships.

The committee has also appealed to the Zambia Electricity Supply Corporation (Zesco) not to disconnect electricity from council water works as the action might induce the outbreak of cholera. [Passage omitted]

#### Copperbelt Lists 74 Victims

91WE0200 Lusaka TIMES OF ZAMBIA in English  
28 Dec 90 p 1

[Text] The cholera death toll on the Copperbelt has risen to 74 with 73 deaths occurring in Ndola alone and one in Kitwe.

The province has had a total of 646 cases of cholera since it broke out early this month, a total of 447 had been treated and discharged and 199 were still under treatment.

The Minister of Health Dr. Jeremiah Chijikwa disclosed this in Ndola yesterday when he toured all the cholera health centres in the district to get on the spot information about efforts to contain the disease.

Dr. Chijikwa who was accompanied by the deputy director of medical services Dr. Sam Nyaywa, chief health inspector for the Ministry of Health Mr. Simon

Goma and the director of pharmaceutical services Mr. Paul Spivey expressed concern at the high death rate in Ndola.

He called on Ndola residents in particular to rush to health centres immediately once they noticed the symptoms of cholera because a slightest delay could be fatal.

He blamed the high rate of deaths in Ndola to poor sanitary facilities and to delays in taking patients to health centres.

He said it has been found that water from wells in MacKenzie township which he visited was contaminated mostly because these were situated next to the lavatories which were erected on higher grounds and all the rubbish from them floated into wells.

Dr. Chijikwa who was taken round the centres by the chairman of the cholera task force committee Dr. Victoria Munthali, and the chief inspector of health Mr. Richard Mwape said Zambia was facing difficulties in preventing an outbreak of cholera because the disease emanated from her neighbours.

And a total sum of K1,540,000 has been pledged to help the Zambian Government contain the spread of cholera by the United Nations Development Programme (UNDP).

The UNDP resident representative, Mr. Aliue Sallah said the money would be used to buy emergency supplies to assist the government's efforts in curbing the outbreak.

Meanwhile, the Government has declared some districts in Northern, Luapula and Copperbelt provinces "cholera infected areas."

Dr. Chijikwa says in a Government GAZETTE notice that the whole of Mbala, Kaputa and Kasama districts are affected by the killer disease.

Nchelenge, Kawambwa and Mwense districts in Luapula Province are also cholera infected.

### Extends to Luanshya

*91WE0200 Lusaka TIMES OF ZAMBIA in English  
19 Dec 90 p 3*

[Excerpt] Cholera has now spread to Luanshya district where five people have been confined to Chibolya health centre and two others have been admitted to Roan Mine hospital since the disease was first confirmed last Friday.

The outbreak of the killer disease has placed the financially ravaged council under strain to find additional resources to combat the disease.

Luanshya district governor Cde. Godwin Mwamba said his council was currently facing serious problems in paying workers the increased salaries and housing allowances and it has in the past six months lost three new vehicles through thefts.

"I have problems, health workers must be mobile to fight the killer disease but this is not possible because of lack of transport," Cde. Mwamba said.

He requested companies including ZCCM and all residents to contribute towards the eradication of cholera. [Passage omitted]

### Deaths in Northern Province

*91WE0200 Lusaka SUNDAY TIMES OF ZAMBIA  
in English 16 Dec 90 p 9*

[Text] The Northern Province cholera surveillance committee has expressed concern at the continuing spread of the killer disease in the area and has directed institutions responsible for implementing preventive measures to enforce them seriously. A statement issued by committee chairman Paramount Chief Chitimukulu, said the committee had discovered that some of the recommended measures had not been enforced. Ngwenya harbour in Mpulungu, for instance, had not yet been closed by local authorities despite the committee's directive last month, posing a great risk to people using the filthy harbour. The paramount chief, who is also provincial Member of the Central Committee, said 33 people had died in the province and the disease had spread to two more areas previously not affected during the past few days. He said the quarantining of "kapenta" and fish for a least seven days before it was sold to members of the public or allowed out of Mpulungu should be enforced effectively.

### Over 600 Cases in Three Provinces

*91WE0200 Lusaka TIMES OF ZAMBIA in English  
13 Dec 90 p 1*

[Excerpt] Eighty-three people have died from cholera in three provinces struck by the killer disease while aid has started pouring in to combat the spread, Government said in Lusaka yesterday.

Health Ministry permanent secretary Dr. Evariste Njelasani said in an interview 666 cases had been identified and admitted to hospitals or treatment centres but 501 have since been discharged.

The disease has been detected in Northern Luapula, Copperbelt and Central provinces. Central has recorded only one case, and the patient has since been discharged.

Thirty-five people have died on the Copperbelt, 28 in Northern and 20 in the Luapula Province.

Sixty victims are still in hospital on the Copperbelt, 16 in the Northern Province and six in Luapula.

The United Nations Children's Fund (UNICEF) has donated two boat engines, 6,000 needles, 2,000 disposable cups, 5,000 disposable gloves and 2,000 plastic aprons.

More aid was expected to come from the World Health Organisation (WHO) any time, said Dr. Njelasani.

The Government has on two occasions convened two donor meetings on Monday over the outbreak while another meeting is expected to be held soon.

The Zambia-Zaire joint permanent commission that met in Ndola also resolved that medical personnel from both Zaire and Zambia should meet on December 27 in Ndola to map out a common strategy.

Dr. Njelesani said contrary to the impression created that the Government had not helped combat the Copperbelt outbreak, a lot of material and medicines had been rushed to the region.

He allayed fears that the killer disease has already struck Lusaka saying some diarrhoea cases at the University Teaching Hospital sparked a rumour of the cholera spreading to the capital.

A lot was being done to try and contain it. At the last Press conference President Kaunda directed local communities to scout for support from international organisations to fight cholera which this time came from Zaire.

In Kitwe, the number of cholera patients has risen from two to five and the area acting senior governor Colonel Albert Nchenesi described the situation as "serious." [Passage omitted]

### **Cholera Outbreak Kills 28 in Lusaka**

*MB0602183891 Lusaka Domestic Service in English  
1800 GMT 6 Feb 91*

[From the "Main Points" following the news]

[Text] There is an outbreak of cholera in Lusaka and 28 people were reported dead at 1000 [0800 GMT] this morning. This came to light when the minister of decentralization, Comrade [name indistinct] toured a number of [words indistinct].

### **Health Minister Details Cholera Fatalities**

*MB1802170491 Johannesburg SAPA in English  
1636 GMT 18 Feb 91*

[Text] Lusaka Feb 18 SAPA—Four hundred and sixty five people have died from cholera in Lusaka, Zambian Minister of Health Dr. Jeremiah Chijikwa said at the weekend.

Dr. Chijikwa also reported that Lusaka had 5,187 suspected cases of cholera by last Wednesday [13 February].

The present cholera epidemic is the second to occur in Lusaka in the last 12 months, reports a SAPA correspondent.

Dr. Chijikwa said the epidemic would be more expensive to contain because the killer disease has spread on a wider scale and the current rains had aggravated the situation.

The minister appealed to the police to help in the cholera prevention drive by effectively stopping street vending, which had contributed greatly to the epidemic.

Seven out of Zambia's nine provinces have so far been hit by the epidemic, bringing the overall cholera death toll to 685 by the weekend.

Western and North-western Provinces have not yet been affected, but authorities fear the disease, which is carried unknowingly by travellers from one region to another, will soon spread to all corners of the country.

The densely populated Copperbelt Province has so far recorded 159 deaths with more than 2,000 suspected victims undergoing treatment.

In Chipata, capital of Eastern Province, 61 deaths have been reported but Ministry of Health officials said the disease had declined in the Northern and Luapula Provinces where the epidemic first broke out.

### **Cholera Epidemic Reportedly Spreading in Zambia**

*MB2302131091 London BBC World Service in English  
1830 GMT 22 Feb 91*

[Text] It looks like the cholera epidemic that is currently sweeping in Zambia is sure to reach into new areas that not yet registered the disease. Six hundred people are already dead, and there is now a national campaign underway to raise funds to try and control the killer disease, but it will take more than money to get the epidemic under control. John Mokhele reports from Lusaka: **Mokhele:** The outbreak began on the Copperbelt and gradually spread to the Northern, Central, and Lusaka Provinces. This is the second cholera epidemic to have hit Zambia. The first occurred almost two years ago. The question being asked relates to why the government acted slowly in instituting adequate preventative measures.

The main areas where the cholera bacteria has found an easy breeding ground are the inner city slums. It is there where the majority of city dwellers are housed, where the greatest decline of sanitary facilities has been recorded. But much of the blame, many people believe, rests squarely on the relevant government authorities. It is understood, for instance, that some government departments had responded initially extremely poorly to offers of funds from donor agencies and foreign missions towards the fund raising exercise. Only when it became clear that the epidemic was more serious than it had first appeared did the government wake up to the full dimension of the problem and the subsequent consequences.

Britain and Italy are among some of the foreign governments which have offered financial assistance. This week, anti-cholera relief equipment worth about 10 million kwacha arrived in Lusaka through the U.N. Disaster Relief Organization, part of a donation from the Italians.

Several local government authorities and city councils have also launched their own individual fund raising ventures. But it will require more than just money to contain the epidemic. Some residents in Chingola on the Copperbelt have, for instance, complained that they have been living under the same unhygienic conditions for the past five years despite repeated complaints to the council. Now, more than 10,000 residents of the town's Twatacha township could die of cholera because sewers in the township are blocked. The sad fact is that their predicament could easily have been prevented.

#### 'Mysterious Disease' Kills 19 Workers at Lusaka Firm

*MB1902183591 Lusaka Domestic Service in English  
1800 GMT 19 Feb 91*

[Text] An Indeco [Industrial Development Corporation] spokesman has announced that the death toll at Lenco [Lusaka Engineering Company] has risen from 19 yesterday to 23. The spokesman also said preliminary investigations by the Ministry of Health officials and the Lusaka Urban District Council medical officers have ruled out cholera as a possible cause of the deaths, and all workers were today summoned to the company premises for examination to determine the cause of the mysterious disease in view of the latest developments.

The spokesman appealed to all those workers who did not report today to turn up tomorrow for medical examination.

**Dermatoglyphic Research Project for Ethnic Minorities Done**

*OW0202135591 Beijing XINHUA in English  
1337 GMT 2 Feb 91*

[Text] Guiyang, February 2 (XINHUA)—An extensive research project related to the dermatoglyphics of ethnic minority groups in southwest China has been completed after 10 years effort.

Dermatoglyphics is the study of the patterns of ridges and crevices on the hands and the soles of the feet. China began this particular dermatoglyphic study in the early 1910s, said Wu Lifu, an associate professor at the Guiyang Medical College, and one of the project organizers.

The "Records of Dermatoglyphics of Ethnic Minority Groups in Southwest China", a book based on the

research project, will be published by the Science and Technology Publishing House of Guizhou Province in southwest China.

Dermatoglyphics has become an important area of medical study because of the help it provides in diagnosing certain diseases, including congenital diseases. The study of dermatoglyphics is also of practical value to judicial investigations, and to the selection of prospective athletes, as well as to the study of the origin, evolution and mutual relationships of the human race and nationalities.

Over 20,000 samples were collected from 38 groups in 47 counties, and one million pieces of data were obtained. As a result, dermatoglyphic features of the 31 nationalities, who inhabit in the five southwestern provinces and regions, have been recorded.

The research was jointly conducted by eight Chinese medical colleges.

**HONG KONG****Health Chief Backs Need for TB Center**

*91WE0187 Hong Kong HONG KONG STANDARD in English 5 Oct 90 p 6*

[Article by Denise Wong]

[Text] Hongkong is in urgent need of a research centre for tuberculosis and chest infections because of the high incidence of such diseases in the territory, according to consultant physician, Dr. Chan Shiu-lun.

Joint research into TB between Hongkong's medical authority and a British research centre ended in March, adding to the urgency, said Dr. Chan, who is in charge of the territory's TB and chest services.

He said that in the past 20 years Hongkong had depended on the British centre for laboratory and statistics services, as well as expert advice in TB research.

He said that as Britain had a very low death rate from TB, it was shifting resources to other fields.

Last year there were 403 deaths from TB in Hongkong and 6,704 recorded cases, a notification rate of 116 per 100,000 people compared to seven in Britain.

The territory's TV notification rate has fallen from 397 per 100,000 people in 1981, to 141 in 1978 and 124 in 1988.

"Although the rate has been declining in Hongkong, it has still not reached a satisfactory level, compared to other advanced countries," said Dr. Chan.

In Asia the rate was higher than Singapore's, Japan's, and certain areas of China such as Beijing, Shanghai and Tianjin.

Dr. Chan said the high number of TB cases was related to overcrowding and an influx of Chinese migrants and Vietnamese boat people.

Hongkong people also frequently travelled to Guangdong, which has a higher TB notification rate than the territory, he said.

The Medical Development Advisory Committee recently supported the recommendation of two visiting British experts to set up a research centre in the territory.

The annual cost of running the centre would be between \$3 million and \$4 million.

Dr. Chan said the centre, to be staffed with at least one experienced statistician and bacteriologist, was needed to find ways to lower the number of deaths from TB and in studying the effectiveness of TB treatment.

In the long run, it could also conduct studies into other chest diseases such as lung cancer and asthma, he said.

"Setting up such a centre should be given very high priority, unless the Government decides to give TB service little attention in terms of allotting public money," Dr. Chan said.

He said that as TB still topped notification and death rates among all infectious diseases, it could hardly be ignored.

As well as financial support from the Government, Dr. Chan said the research centre could also seek donations and rely on fund-raising.

At present, 99 percent of babies receive the BCG (bacillus Calmette-Guerin) vaccination, while children aged between six and 10 have received a second inoculation. The effectiveness of each injection lasts about 10 years.

However, the effectiveness of the vaccine for 95 percent of people starts to decline after the age of 15.

**Hepatitis B Drug a False Hope for Cure**

*91WE0204 Hong Kong SOUTH CHINA MORNING POST in English 2 Dec 90 p 5*

[Article by Kathy Griffin—First eight paragraphs are introductory paragraphs]

[Text] There are now five strains of hepatitis and local doctors predict more to come.

Hepatitis E was discovered earlier this year and found to be similar to hepatitis A, which swept through the territory in an epidemic 3 years ago.

Hepatitis C and D have also been identified in recent years and show similarities to hepatitis B, which infects 10 percent of Hong Kong's population.

Hepatitis C was also only recently discovered, in 1988, and accounts for 60 to 90 percent of what used to be called non-A, non-B hepatitis. It has affected less than 1 percent of local people so far.

Hepatitis B is the most serious of the viruses in Hong Kong because it infects so many people. It is usually transmitted from mother to child, through blood transfusions, and by sharing needles.

Hepatitis C is also carried in the blood but is more difficult to pin down. It appears spontaneously in people who are not at risk and, like hepatitis B, can linger for years and lead to cirrhosis, cancer and other liver diseases.

Hepatitis A and E are less harmful forms of the virus. They are transmitted by food such as contaminated shellfish.

Hepatitis D appears only in people who already carry hepatitis B and hastens the progression to liver disease by more than five times.

Some hepatitis B carriers in Hong Kong are being charged thousands of dollars for a "cure" that experts say has little proven effect.

The carriers pay for injections of the drug interferon, which has improved or cured the infection in tests on Caucasians but not on local Chinese.

The drug is still being tested in Hong Kong but some private doctors fail to tell their patients this and offer them interferon shots at \$1,500 to \$2,000 each, on a treatment course that usually runs three times a week for 3 to 4 months.

Experts say these doctors are playing on people's fears, as hepatitis B can lead to cirrhosis, liver cancer and other diseases. About 10 percent of Hong Kong people are infected with the virus.

"It's creating a lot of false hope for chronic carriers," Dr. Betty Young of Queen Elizabeth Hospital said.

The government approved the drug for hepatitis treatment this year, based on test results for Caucasians.

But Hong Kong University's Dr. Lai Ching-lung, who has done free clinical tests of interferon on local Chinese since 1985, said so far the drug had shown little effect.

Dr. Lai said patients came to him when they ran out of money or the interferon did not work. At least five private doctors were involved although he did not know the total, and most were based in Central, he said.

"They take figures from studies on Caucasians and sometimes multiply them. One patient was told the cure rate was 70 to 80 percent, which is better than any study I have ever heard of," Dr. Lai said.

He said some patients who received interferon from private doctors did not believe him when he told them it was ineffective.

"It can take a lot of time to convince people that it's of no use. They tend to believe the person who gives them hope, rather than the one who says there is no cure," he said.

His concern is not only one of patients being cheated but of dangers to their health.

Interferon is a powerful drug best known for fighting cancer and can cause complications if administered improperly, he said.

"For those with liver diseases, like cirrhosis, it can worsen their condition if it is not administered carefully," he said.

Interferon has cured about 10 percent of Caucasian carriers and stifled the virus' activity in 30 to 40 percent but no one has been cured in Hong Kong.

The only local people who benefitted were 10 to 15 percent of adults who were already showing signs of fighting off the virus before they received interferon. The drug reduced the virus' activity but did not cure them. There was no benefit for children.

Dr. Lai could not explain why the drug had not succeeded so far on local people, although it might be because most Hong Kong carriers were infected at an early age and developed a tolerance to the virus that made it more difficult to treat.

Hepatitis B is transmitted by blood, often from mother to child.

## INDONESIA

### Cholera-related Disease Kills 12 in Riau Province

BK1302161591 Jakarta Domestic Service in Indonesian  
1500 GMT 13 Feb 91

[Text] The government is still studying the cause of an outbreak of a cholera-related disease, which has affected 11 villages in Kampar, Riau Province, and claimed 12 lives. Speaking in Pakan Baru today, Mrs. Salohot, head of the Riau Provincial Health Agency, said efforts to cope with the disease have been made since the outbreak of the epidemic and medicine supplies have been sent to the areas affected.

She said the epidemic might be caused by the drinking water used by the people, but an investigation is still under way to determine the exact type of bacteria that is causing the disease.

## LAOS

### Health Minister on Developments, Epidemics, Aid to Cambodia

91WE0182A Vientiane PASASON in Lao 27 Nov 90 p 5

[Unattributed report: "An Interview Given by Mr. Khambou Sounisai, Minister of Public Health, to PASASON Reporters Concerning Public Health Activities During the Past 15 Years"]

[Excerpts] On the 15th National Day on 2 December our group of reporters interviewed Mr. Khambou Sounisai, the minister of public health. [passage omitted]

In the past 15 years public health activities have expanded both in quantity and in quality. This has contributed to the achievements and victories of the nation as follows:

1. The number of low-level, mid-level and high-level medical cadres:
  - From 1976 to 1990 the number of low-level medical cadres increased from 4,561 to 5,874 or 1.29 times.
  - From 1976 to 1990 the number of mid-level medical cadres increased from 371 to 2,731 or 7.36 times.
  - From 1976 to 1990 the number of high-level medical cadres increased from 90 to 1,173 or 13.05 times.
2. Public health drives to combat disease and epidemics have expanded. In 1987 there was a great deal of malaria

and hemorrhagic fever in some provinces and in the Vientiane Municipality. But because medical personnel and the people worked to suppress it and provide care, the loss of life was kept low. Medical and education students were used, and all organizations coordinated with the drives to control mosquitos. In 1990 there were only 29 cases of malaria in the Vientiane Municipality and there was no loss of life because public health drives controlled the mosquitos at the outset. [passage omitted]

3. The public health network has expanded steadily as follows:

- In 1976 central authority had three hospitals; in 1990 central authority had eight hospitals.
- In 1976 there were 12 provincial hospitals; in 1990 there were 17 provincial hospitals.
- In 1976 there were 96 district hospitals; in 1990 there were 115 district hospitals.
- In 1976 there were 294 medical stations; in 1990 there were 937 medical stations.

—The number of beds for medical care has increased 168 percent. In 1976 there were only 21.38 beds per 10,000 people. In 1990 there were 25.5 beds per 10,000 people.

4. The cooperation of friendly countries and international organizations during the past 15 years has been worth about U.S.\$16 million. This has included both humanitarian grants and cooperation. It has been used to build small enterprises, to repair the infrastructure and to build plants to produce various No. 3 medicines. In addition there was also the value of the medicine and medical equipment provided with this cooperation. In addition funds were received for dozens of groups to study and take short courses. These funds came from the state budget and amounted to more than 10 billion kip; this was another investment in public health made during the past 15 years.

—Six Lao-Soviet medical conferences were held, and conferences of the three Public Health Ministries of Laos, Vietnam, and Cambodia were held on a rotating basis.

—Ten teams of Lao doctors went to help in Stung Treng Province, Cambodia, for a year each time. The teams provided medicine worth 7 million kip each year.

—Laos received the most assistance from the Soviet Union, Vietnam and international organizations such as the World Health Organization, UNICEF and the UN for development, to help children and for other organizations. [passage omitted]

#### **Epidemic Outbreak in Saravane Kills 300 Livestock**

**BK0802103591 Vientiane KPL in English 0918 GMT 8 Feb 91**

[Text] Vientiane, Feb 8 (KPL)—The agriculture service of the southern Saravane Province has recently dispatched a team of 16 veterinarians and a quantity of vaccines to four communes in Saravane District to

rescue domestic animals following a report on the serious outbreak of epidemic.

The outbreak is viewed as the most serious one over the past 15 years. Only in a few days, 265 water buffaloes and oxen were killed by haemorrhagic septicemia and black quarter. The most seriously affected is Boungkham where 120 water buffaloes and 50 oxen died.

The spread of the epidemic has affected dry-season rice cultivation in the district which has achieved only 60 percent of the plan due to the lack of draught animals. In particular at Boungsai village also losing over 100 water buffaloes, only 16 hectares of rice fields have been transplanted with rice seedlings, accounting for 40 percent of the plan.

#### **PAPUA NEW GUINEA**

##### **Supplies to Bougainville; Australian Newsmen Criticized**

**BK1702133091 Hong Kong AFP in English 1107 GMT 17 Feb 91**

[TExt] Sydney, Feb 17 (AFP)—A boatload of much-needed medical supplies left for Papua New Guinea's (PNG) Bougainville Island on Sunday, the first such shipment to head there in over 12 months, AUSTRALIAN ASSOCIATED PRESS (AAP) reported.

AAP said here that the MV Sankamap left Rabaul in Papua New Guinea's northeast to take medicine, fuel, food and other supplies to Bougainville, which was blockaded in May after the Bougainville Revolutionary Army (BRA) declared independence.

It follows the January 23 declaration of peace between the national government and Bougainville's militants, signed in the Solomon Islands capital Honiara, designed to resolve the two-year conflict.

Prime Minister Rabbie Namaliu farewelled the boat, only a day after he said he would officially protest to Australia over an Australian Television crew's trip to Bougainville without Port Moresby's permission.

Mr. Namaliu accused the Australian Government-owned Special Broadcasting Service (SBS) of unethical behaviour and also slammed recent reports published here about Bougainville.

"The SBS exercise in entering the sovereign territory of independent PNG has only harmed the good relations we have with the media in Australia," Mr. Namaliu said in a statement released in Port Moresby on Saturday.

"There are procedures to follow in regard to visits by overseas media to any country," he said.

He said PNG Foreign Minister Sir Michael Somare would also discuss the case with Australian Foreign Affairs and Trade Minister Gareth Evans in Canberra on Wednesday.

Mr. Namaliu also criticised recent reports quoting Moses Havini, Bougainville's Australian-based representative, as saying up to 3,000 people could have died on Bougainville during the two year secessionist uprising.

Port Moresby estimates the death toll at about 100.

Mr. Havini who toured Bougainville with the SBS crew, warned there was an alarming lack of action from the national government to start implementing the peace accord.

According to Mr. Havini, malaria has become widespread, leprosy was re-emerging, women have died giving birth, and skin diseases like yaws and tropical ulcers were spreading on Bougainville.

Mr. Namaliu said the suggestion that 3,000 people had died on Bougainville was "ridiculous" and the government was doing everything in its power to honour the Honiara peace declaration.

David White, executive producer of SBS' current affairs program dateline, confirmed a crew of three had spent a week on Bougainville with only the permission of the interim government of Bougainville.

He said programs would be screened Monday and next Saturday outlining the plight of Bougainvilleans under the government's blockade including allegations by Bougainville doctors of the high death toll.

"There is evidence to suggest that a large number of people have died unnecessarily," Mr. White said in an interview. "There are people on the program who talk of the death toll being as high as 3,000."

This is not the first time Port Moresby has been upset by visiting Australian reporters.

In 1984 the PNG Government expelled Sean Dorney, correspondent for the government-owned Australian Broadcasting Commission (ABC), after his current affairs program interviewed Irian Jayan rebel leader James Nyaro on Papua New Guinea soil.

## PHILIPPINES

### Rabies Epidemic To Be Investigated

91WE0166 Manila DYARYO PILIPINO in Tagalog  
24 Dec 90 p 7

[Text] The Senate will investigate the rabies epidemic spreading fast in Albay in order to help promulgate a decree on the matter.

Secretary Alfredo Bengzon of the Department of Health (DOH) testified at the appointed time at the opening of the sessions in January. He said that a high government official had ignored the rabies epidemic.

Governor Romeo Salalima and other high government officials of Albay will also be investigated.

According to Ziga, the dogs in the locality (Albay) commonly and characteristically cause the epidemic.

He verified the deaths of more than 28 people who were bitten by mad dogs with rabies.

About 558 rabies cases have been recorded in Bicol.

Ziga stated that the negligence of the Department of Health officials, particularly in the local health branch in Albay, has facilitated the spread of rabies.

He added that, had the dogs believed to be rabies carriers been vaccinated with anti-rabies serum, the disease would not have spread.

The senator from Bicol is frightened by the prospect of the disease spreading to other localities, since the death toll is steadily rising; likewise, the Bicol residents are gripped with intense fear of the disease.

According to Ziga, he will ask Bengzon to explain why the spread of the epidemic has not been stopped immediately, regardless of the lack of funds, at the very early stage when there were only a few cases of the rabies disease.

Ziga has asked the residents in the localities mentioned above to confine all their domesticated animals, especially the dogs, to prevent them from contracting rabies.

The Senator further proposed to the residents that, if they feel that their domesticated animals show symptoms of the disease, they should call a veterinary specialist immediately, and that, if the animal is already seriously ill, then they should simply kill it.

The Bureau of Animal Industry (BAI) sent anti-rabies serum to Bicol in order to stop the spread of rabies in the region.

The Inter-Agency committee of the Bureau (of Animal Industry) also organized a program to strengthen the rabies control and the eradication program in Bicol.

The Bureau of Animal Industry committee, the Department of Agriculture (DA), Region V, the Department of Health (DOH), the Governor's Office, and the non-governmental organization (NGO) will coordinate all their efforts in the fastest possible manner.

According to Romeo Alcasid, director of BAI, the objectives of the program are to vaccinate about 80 percent of the dogs in Bicol, to control the number of mad dogs, and to pass an ordinance and a law to support the program.

**BULGARIA****Health Authorities Warn Against Infections**

AU1402202891 Sofia *VECHERNI NOVINI* in Bulgarian 8, 9 Feb 91 p 2

[Unattributed report: "Attention: Danger of Infections Announced"]

[Text] The Ministry of Public Health is concerned about the explosion of epidemics of some parasitic and infectious diseases, which so far have appeared only rarely and in exceptional cases, in December 1990 and January 1991.

In the Sliven area 5 cases of poliomyelitis occurred among children from the Gypsy community who had not received inoculations. In the town of Trustenik an epidemic of ornithosis has exploded. Two of the nine infected poultry workers have died. In Sofia and countrywide several epidemics of internal infections related to severe gastric diseases were recently registered. Eight people were affected by trichinosis as a result of eating pork which was not approved by the veterinary authorities. In addition to all this, the epidemic of infectious hepatitis still persists. The number of cases have increased four times compared with January 1990.

Specialists attribute this alarming situation to the severe economic crisis that has affected our country and to the resulting shortage of several necessary medical drugs for combating infectious diseases. The deteriorating state of the population's nutrition, which leads to a weakening of the human organism's general strength of resistance and immunity system also plays a role in this.

Unfortunately, the forecasts concerning the explosion and spread of infectious diseases and food poisoning are not very optimistic—an increase of diseases is expected. In this connection the regular work of the Government

Commission on Combating Epidemics of Infectious Diseases and Food Poisoning resumed its work on 6 February 1991. At its first session the commission discussed the most urgent preventive measures that should be adopted—such as the improvement of medical and veterinary control over foodstuffs and enterprises, the supply of polio vaccines and raw materials for the production of biological substances, diagnostical agents, and disinfectants, and the urgent providing of soaps and detergents for children's establishments and hospitals.

**Health Minister Reports Poliomyelitis Cases**

AU1502111091 Sofia *BTA* in English 1009 GMT 15 Feb 91

[Text] Sofia, February 15 (BTA)—There are cases of poliomyelitis in Bulgaria, but an outbreak of an epidemic is hardly likely, Prof. Ivan Chernozemski, minister of health, said in parliament last night.

According to him there are grounds to suppose that the disease is caused by an imported wild virus. The poliomyelitis cases were determined amongst compact masses of population living in unsanitary conditions. The children who contracted the disease live in southern Bulgaria and are of gypsy origin. They have not been vaccinated because the vaccine proved to be contraindicated for them.

Minister Chernozemski hopes there will not be an outbreak of an epidemic because more than 96 percent of the Bulgarian children have been vaccinated against the disease.

The Ministry of Health has taken urgent measures and the children of up to six years of age in 15 population centres with risk factors were immunized. All Bulgarian children of this age group who have not been vaccinated because they proved to be counter-indicative will now be immunized, Minister Chernozemski said. The vaccine is of French origin and has been supplied by UNICEF as urgent aid.

## BOLIVIA

### Agricultural Products from Peru, Chile Banned

PY0902114091 *La Paz La Red Panamericana*  
in Spanish 0000 GMT 9 Feb 91

[Text] The government has banned the entry into Bolivia of vegetable and animal foodstuffs from Peru and Chile due to the cholera outbreak in those countries.

The Agriculture, Livestock, and Campesino Affairs Ministry [MACA] issued Resolution No. 44/81 dated 8 February 1991 stating that this prohibition will remain in effect until the problem is overcome in these two neighboring countries.

Moreover, Bolivia has instituted a plant and animal quarantine to protect against this disease which has affected more than 400 people in Peru of which some [number indistinct] have died.

The MACA resolution orders the destruction and incineration of vegetable or animal goods imported from Peru and Chile.

The national directorate for agricultural and livestock production will be responsible for the full implementation of this resolution that is signed by Minister Mauro Bertero and the under secretary for agricultural and livestock development.

It has also been decided that the Health Ministry's national epidemiology directorate will be responsible for gathering additional information on the problem.

## CHILE

### Health Service Reports Typhus Cases Decline

PY1202134091 *Santiago EL MERCURIO* in Spanish  
5 Feb 91 p C5

[Summary] The Metropolitan Environmental Health Service has reported that the total number of typhus cases has declined from 6,414 during 1989 to 4,871 during 1990.

## COLOMBIA

### 'State of Alert' Along Border to Prevent Cholera

PA1302153791 *Bogota Inravision Television Cadena 1*  
in Spanish 0000 GMT 13 Feb 91

[Excerpt] [Passage omitted] In order to prevent a catastrophe, Colombia, which shares a 1,626 km border with Peru, has declared a state of alert in the border health services. Colombia also sent a special commission to the area to guarantee all necessary assistance to the Peruvian authorities, such as prompt distribution of serums, hydration salts, and intravenous supplies. [Begin recording]

**Unidentified health official:** We are going to carry out preventive control measures along the border, coordinating with various institutions, vaccinating as required, and taking care of the people so that we will not be affected by this disease. Can you imagine: Cholera in our country at this day and age? [end recording]

Although the disease that first appeared in Piura, Peru is highly contagious, there will be no restrictions on tourists coming from or going to Peru so long as things do not worsen. However, the vaccine, which is effective for a three-month period of time, will be required. Also, port controls will be tightened on products imported from Peru, such as fishmeal and sardines.

However, the poor sanitary conditions prevailing along the border will make it difficult to control the intake of food such as fish and seafood, the adequate disinfection of fruits and vegetables, and contact with the contaminated waters where the bacteria flourishes. Once this bacteria has entered the body, a person's body weight can be reduced by 10 percent because of the uncontrollable vomiting and diarrhea.

In addition to these measures adopted to fight cholera, the Health Ministry has implemented a new plan to prevent another epidemic, rabies, which is also threatening Colombia.

## COSTA RICA

### Health Specialists Express Concern Over Malaria Increase

PA0102204591 *San Jose LA NACION* in Spanish  
22 Jan 91 p 8a

[Article by Maria Isabel Solis]

[Text] Costa Rican health specialists have asked the Health Ministry to improve its malaria control program.

The specialists are concerned because, according to their statistics, there were 1,151 cases of malaria last year, 452 cases more than in 1989. We emphasize that the 1990 rate is the highest one in the past eight years.

Dr. Jose Luis Garces, director of the Insects and Rodents Control Department, wrote a report stressing the need to increase personnel at the banana production areas because that is where the greatest number of malaria cases have developed. The report states that 98 people had been reported as having malaria in these areas up to 14 January 1991.

According to Dr. Garces' explanations, which are contained in the document sent to General Health Director Emilia Maria Leon, it is very difficult to control malaria in these areas because many people do not have a permanent residence. This situation contributes to the spreading of malaria to other sectors of our territory.

As the Health Ministry is unable to open more positions in the area, Dr. Garces suggested that the ministry charge for the inspection of ships and vehicles at national ports.

He also proposed that the banana companies which want to start planting or that want to extend their crops in the Atlantic area should have the personnel to maintain and pay for the surveillance and control programs.

Leon said that there is a plan to deal with the malaria problem, which consists of implementing strict controls at the northern and southern borders to prevent the spreading of the disease.

She noted that the plan is financed with international funds and coordinated with Panamanian and Nicaraguan health authorities.

Leon said that one of the problems in controlling the disease is that many people enter the country without documents, thus avoiding controls by health authorities.

## CUBA

### Medical Aid Sent To Help With Cholera Epidemic in Peru

*FL0902021491 Havana Tele Rebelde and Cuba Vision Networks in Spanish 0100 GMT 9 Feb 91*

[Text] Five Cuban doctors left for Peru a few hours ago. This was a quick response to the help requested by Peru which is being hit by a cholera epidemic. Cuban Public Health Minister Julio Teja saw off the specialists at the Jose Marti International Airport in Havana. The Cuban public health minister told our reporter: We decided to provide this humanitarian help after a call was made by Peruvian health authorities. He added that the help consists of [figure indistinct] tons of medicines, basically oral rehydration salts and saline solutions, to fight the dehydrating effects which characterize this disease. [Words indistinct] health and epidemiology which is accompanying the donation will serve as advisors in the work the Peruvian doctors have already begun to stop the spread of the epidemic.

We also learned about the control measures our customs authorities are implementing as a precaution because of the presence of the virus in the area.

Finally, Teja highlighted how other international organizations are also sending aid inasmuch as this is a problem that concerns every country.

The minister counselor of the Peruvian Embassy also went to the Havana airport.

[Begin minister counselor recording, identified by caption but illegible because of poor reception] I believe that the amount of medicines being donated to our country, as the minister has noted, and the cooperation of medical personnel is a truly notable gesture because it shows what the Peruvians know very well, the philosophy of the Cuban people and government [words indistinct] always

with the Latin American brother when he has problems. I believe, I repeat, this is a gesture which extols the Cuban Government and people, which the Peruvian Government and people deeply appreciate. Thank you. [end recording]

### Health Ministry Announces Measures To Prevent Cholera

*FL1402174991 Havana Tele Rebelde Network in Spanish 1200 GMT 14 Feb 91*

[Text] The Public Health Ministry has announced measures to prevent cholera in Cuba in spite of the fact that that terrible disease is affecting areas that are far away from the island. The arrival of commercial flights could be a source for the introduction of the disease. Thus, most of the measures are aimed at the Civil Aeronautics Institute of Cuba, especially at the Jose Marti International Airport and ports.

Among them is the close control of the food and liquids Cubana Airlines carries, the disinfection of the left-over water it brings, and the incineration of all left-over food. A strict control of insects that could come inside the aircraft is also implemented because they are carriers of the disease. Other measures established is to have a control of all travelers who come from high-risk areas for five days. All people arriving in the country will receive a warning card explaining that they should go to the closest health center in the event they present symptoms such as vomiting or diarrhea.

The Pedro Kouri Tropical Medicine Institute has begun a training session for all their microbiology specialists and technicians on the characteristics of cholera. This will be extended to the entire country. There should not be a problem with cholera entering the country if all the measures announced by the Public Health Ministry are strictly observed.

## DOMINICAN REPUBLIC

### Measures Seek To Avoid Spread of Cholera Epidemic

*FL1402175091 Santo Domingo Radio-Television Dominicana Radio Network in Spanish 1600 GMT 14 Feb 91*

[Text] According to Epidemiology Department Director Carmen Rodriguez, the Ministry of Public Health will implement control measures in all national ports and airports to avoid the spread of cholera in the country. She said that over 65,000 [figure as heard] have died from cholera in Peru.

She added that all those who arrive from Peru will receive a card that will register cholera symptoms. Rodriguez also said that Dominican Public Health authorities are alert to the cholera outbreak reported in Peru and that authorities are drafting several measures to prevent the spread of the disease.

## ECUADOR

### First Cases of Cholera Detected Near Border With Peru

PA1302035591 Madrid EFE in Spanish 1634 GMT  
12 Feb 91

[Text] Quito, 12 Feb (EFE)—The daily newspaper HOY published in Quito reported today that three cases of cholera, the first in Ecuador, have been detected in the southern town of Huaquillas near the Peruvian border.

According to the newspaper, those affected are merchants from the border area, whose condition "is not serious."

The report added that it has not been possible to obtain an official confirmation on the first cases of cholera in the country because "hospital and health authorities in the Province of El Oro where Huaquillas is located could not be contacted due to the Carnival festivities."

Health Minister Plutarco Naranjo recently said that no cases of cholera had been registered in Ecuador and that special measures had been adopted, particularly at the border area, to prevent the spread of the epidemic from Peru.

### Government Declares Health Emergency in 2 Provinces

PA1402024991 Quito Radio Quito in Spanish  
2300 GMT 13 Feb 91

[Text] The Ecuadorian Government has declared a state of emergency in El Oro and Loja Provinces for epidemiological reasons in order to prevent and avoid the spread of cholera.

Executive Decree No. 2177 states that the border provinces of El Oro and Loja are at great risk because persons are leaving the neighboring country of Peru due to the rapidly spreading cholera there.

The decree also states that the national government is dutybound to protect the health of the Ecuadorian people and that in accordance with Article 71 of the Health Code the Health Ministry must urgently impose the necessary measures in order to control and avoid an epidemic.

## PERU

### Cholera Outbreak Reported in Chimbote, Chancay

PY0502183691 Lima Radio Nacional del Peru  
Pachacuteq Network in Spanish 1100 GMT 5 Feb 91

[Text] Carlos Carrillo Parodi, Health Institute director and acting health vice minister, has confirmed the existence of a cholera outbreak in the ports of Chancay and Chimbote. Carrillo Parodi reported that thus far, 18 people have died and 450 people are suffering from the

disease; of this number, 100 people are in serious condition and suffering complications.

Health Vice Minister, Victor Cuba Aure, has confirmed that 18 people have died and 450 people have been affected by a strange epidemic that has broken out in Chimbote and Chancay. Cuba Aure said it is premature to say that this disease would correspond to a type of cholera as long as the official results of the analysis that is being carried out are still not known.

In this regard, the health vice minister recommended that the population boil water, thoroughly wash food-stuffs and table utensils, and use boiled water to cook.

### Hundreds Hospitalized in Cholera Epidemic, 42 Dead

PY0702143891 Madrid EFE in English 1252 GMT  
7 Feb 91

[Text] Lima, Feb 7 (EFE)—An outbreak of cholera, which is sweeping across Peru for the first time, has killed at least 42 people, while hundreds of others have been hospitalized, medical sources and news media said.

Although the Health Ministry has only recognized 18 deaths, hospital officials in northern Peru said Wednesday [6 February] that 38 people had died in the area since the epidemic began. Meanwhile, a spokesman for a hospital in Lima's port city of Callao told reporters that cholera had killed four people there. Radio reports said five people were admitted on Wednesday to two of the capital's hospitals with symptoms.

The first cases of the disease, which up until now had not hit this strife-torn Latin American country, were registered in the northern port city of Chimbote, 440 km from the capital. Between 500 and 700 cases of cholera have been reported there, with around 373 people in hospital.

Radio reports said 15 people have been hospitalized in the nearby northern coastal city of Trujillo, one of whom was in a coma. State television reported that eight people had died of the infectious disease in Chancay, 80 km north of the capital. Chamber of Deputies president Victor Paredes said that in the northern city of Piura, 1,000 km north of Lima, 10 people had died of cholera and 87 others were being treated in hospital.

On Wednesday the health ministry only confirmed 14 deaths in Chimbote and four in Chancay and said no cases of the bile disease had been discovered anywhere else in the country.

Radios, television stations and newspapers have been giving information on how to prevent catching cholera, while Health Minister Carlos Vidal Layesca has cut short a visit to the United States to head health operations against the disease. But hygiene experts have expressed concern that the epidemic could spread quickly due to the lack of medical facilities and the dire sanitary conditions in which millions of Peruvians live, especially in

the numerous shanty towns which ring Lima. An estimated 55 percent of the 21 million population scrape a living below the poverty line.

### **Cholera Cases in Prison; Beaches Reported Contaminated**

*PY0902014891 Lima RTP Television Network in Spanish 1100 GMT 8 Feb 91*

[Excerpts] Justice Minister Augusto Antonioli has confirmed that cases of cholera have been detected at the Piura Penitentiary. All Peruvian penitentiaries have been declared in a state of emergency as a preventive measure. [Begin recording]

**Reporter:** Minister Augusto Antonioli has confirmed the death of two prisoners at the Piura prison as a result of the cholera epidemic. He also pointed out that several cholera cases have been registered at the Chimbote prison, although the exact number is not clear yet. He added that no other cases have been registered in other penitentiaries so far. [passage omitted] [end recording]

The sanitation sector has reported that beaches on the Peruvian coast have also been determined to be contaminated by cholera. For that reason, sanitation sector officials have asked the people not to go to the beaches. Experts have been examining the beaches to determine the level of contamination and the results of this study will be announced in the next few days. [passage omitted]

Jose Miguel Arca Gonzalez del Valle, Lima Sur Health Department director, has reported that the cholera virus has been discovered in various fishing centers. [recorded passage omitted]

### **Officials Tally 1500 New Cholera Cases in 24 Hours**

*PY0902112891 Madrid EFE in English 0951 GMT 9 Feb 91*

[Text] Lima, Feb 9 (EFE)—Peruvian officials confirmed Saturday that some 1,500 new cases of cholera have been reported over the past 24 hours, pushing the total to over 5,000 and leading them to declare a national public health emergency.

About 50 people are believed to have died from the disease since the first cases were reported January 23. Health officials say over 200,000 people are at risk and 8,000 of them might die unless Peru receives urgent international aid.

The epidemic has spread 1,250 km along the Peruvian coast from Piura, 1,050 km north of Lima, to Chincha, located 200 km south of the capital.

Authorities have warned people to avoid eating seafood and fish, to boil water, and to stay away from beaches, particularly those around Lima.

Officials say they suspect the epidemic was triggered by seafood contaminated by waste discharged from ships and sewage pipelines, attributing its rapid spread to Peru's endemic poverty and substandard medical facilities.

Cholera is highly contagious, with an incubation period of between three and five days. Its symptoms are characterized by vomiting and internal bleeding.

### **Over 8000 Confirmed Cases of Cholera**

*PY1202121291 Madrid EFE in English 0234 GMT 12 Feb 91*

[Text] Lima, 11 Feb (EFE)—Peruvian Officials said Monday that 66 people had died in the six-week-old cholera epidemic, which the World Health Organization (WHO) described as a "catastrophe" that could claim up to 10,000 lives.

The Peruvian Health Ministry said 8,500 cholera cases had been diagnosed and that 1,855 people were hospitalized with the disease that broke out on January 23.

The epidemic, which is largely confined to Peru's 3,000-km Pacific coastal strip, is believed to have originated in plankton and passed on through the fish and shellfish that figure prominently in the Peruvian diet.

Monday's death toll figures came as the WHO released a report warning that the epidemic could see 300,000 cases and up to 10,000 deaths before the disease had run its course.

Meanwhile authorities in the northern Chilean border town of Arica Monday urged the closing of the country's border with Peru following an outbreak of cholera in the nearby Peruvian town of Tacna.

Every day some 10,000 Peruvians make the 50-km journey across the Chilean border to seek work in Tacna.

### **Health Minister Details Effects of Cholera Epidemic**

*PY1902003691 Madrid EFE in Spanish 1809 GMT 18 Feb 91*

[Text] Lima, 18 Feb (EFE)—The Peruvian Government today anticipated "serious" economic "problems" as a result of the growing rejection of Peruvian exports due to the cholera epidemic that is affecting the country and that has infected 16,600 people and killed nearly 100 others.

In a news conference with foreign journalists, Peruvian Health Minister Carlos Vidal said the negative reaction against Peruvian export products due to fear of contamination is "incomprehensible" and "lacks a scientific basis," and it may represent a \$700 million loss in export income.

Carlos Vidal said Bolivia "was not right" in burning Peruvian canned fish and the Bolivian as well as Argentine and French rejection of Peruvian products is based on a market struggle rather than on a scientific health measure. The minister said Peruvian sea and agricultural exports are processed "according to international sanitary norms that eliminate any kind of contamination."

Fishing is the second most important Peruvian export activity after mining, and represents a \$500 million annual income, nearly 20 percent of the total Peruvian income from exports.

"People forget we are in the twentieth century and that we know how to treat cholera. Evidence of this is our low mortality rate—0.6 percent," said Vidal, who expects the epidemic to be controlled in two months.

Vidal also criticized the restrictions imposed on travelers coming from Peru and the demand for vaccinations by some countries, since "they are useless in preventing eventual contamination," he said.

On either 19 or 20 February in Brussels, the European Community will decide whether to impose restrictions on human consumption of Peruvian products, but some companies have already suspended their trade with Peru.

The Peruvian Government has assigned a Foreign Ministry group to analyze the situation and carry out "an aggressive campaign," as demanded by businessmen, to "demonstrate that neither sea nor agricultural exports are contaminated with the cholera bacillus."

"The Peruvian Government's answer in this case must be similar to that of the Chilean Government during the case of the poisoned grapes," said Gaston Benza Plucker, president of the Exporters Association (ADEX).

Vidal praised the U.S. decision not to forbid either the arrival of products or travelers from Peru into the United States. Business sources nonetheless reported that U.S. health officials warned importers that if cholera is introduced into the United States, they will be sanctioned.

Although cholera is endemic in 98 countries, exports from these countries are not forbidden, and there are even controlled cholera outbreaks in Louisiana and Texas, according to the Peruvian health minister.

Vidal avoided making predictions about the consequences of the cholera epidemic in Peru, but he thinks the calculation that it would cause between 1,600 and 2,000 deaths made by the Panamerican Health Organization office in Lima may be correct. The minister said there is "a serious risk" that cholera may become endemic in Peru, given the delicate economic and social domestic situation.

The Peruvian Government has asked the Inter-American Development Bank (IDB) for a \$100 million

credit to improve the Lima water supply and sewage system, which is the main source of contamination in this plague. Vidal said he hopes the IDB "will be sensitive" to the situation created by the cholera epidemic since credits to Peru continue to be frozen while the government negotiates its integration with the multinational financial organizations after five years of financial isolation.

### Cholera Cases Reportedly Increase to 22,497

PY2002160491 Madrid EFE in Spanish 0245 GMT  
20 Feb 91

[Summary] The Health Ministry today reported that since Sunday approximately 2,000 people per day have become infected with cholera and that the number of cases in the country now totals 22,497, of which 115 have proved fatal.

According to official figures, less than one percent of the people affected with cholera have died and 5,127 have been hospitalized.

### Health Minister Guarantees Safety of Food Exports

PY2402005091 Madrid EFE in Spanish 0122 GMT  
23 Feb 91

[Text] Lima, 22 Feb (EFE)—Health Minister Carlos Vidal today assured foreign ambassadors accredited to Peru that Peruvian food exports have received international certification guaranteeing that they are free of contamination.

Vidal met the ambassadors in his office to brief them on the current status of the cholera epidemic affecting the country. He also reported the results of an analysis by the Infectious Disease Center in Atlanta. According to these results, Peru's hydrobiological, farm, and canned food products are not contaminated. Vidal requested these tests so governments would lift the bans on Peruvian food exports that have been in force since 4 February, following the outbreak of the cholera epidemic on 23 January.

A Health Ministry spokesman has reported that some 26,340 people have been infected with cholera and 6,050 have been hospitalized.

Vidal said the sanitary restrictions are unnecessary and that "they only create distrust and uneasiness." He pointed out that cholera is an endemic disease in 98 countries and that exports of food products from these countries are not restricted. He added that the disease is under control in Peru, with the mortality rate at 0.5 percent. He also said the number of cholera cases is decreasing and that epidemic control systems in the environment, drinking water, and food sectors are being reinforced.

On 21 February Prime Minister Carlos Torres y Torres Lara said that only five percent of the fish caught on the

shoreline is contaminated with the cholera virus, while the 95 percent of exportable fish caught on the high seas—which is used to produce canned food—is not infected. He announced that the WHO will release a report to confirm that Peruvian food exports are not a risk to spread cholera.

The Agriculture Ministry today sent a note to the EEC giving assurances that Peruvian fruit exports are not contaminated.

According to sources from the export sector, Argentina, Brazil, Bolivia, Colombia, Chile, Ecuador, and Venezuela are among the South American countries that have adopted measures against Peruvian food products. The sources added that France and Italy restricted imports of Peruvian fish and shellfish, while the EEC—in which the

two countries are members—postponed the possible adoption of joint measures until 15 March.

The United States has not prohibited the import of Peruvian farming and fishing products but has declared a state of "red alert" which entails a strict control process before the products are allowed to enter the country.

#### Leishmaniasis Outbreak Reported in Huamachuco Valley

PY0902024091 Lima EXPRESO in Spanish 28 Jan 91 p 10

[Summary] Health officials have reported 350 cases of leishmaniasis in the Huamachuco valley near the provinces of Santiago de Chuco and Sanchez Carrios.

## INDIA

### Encephalitis Reported in Karnataka, Andhra Pradesh

91WD0378 Calcutta THE TELEGRAPH in English  
9 Dec 90 p 7

[Text] Bellary, 8 Dec (PTI)—Encephalitis claimed three more lives in Bellary, Karnataka, yesterday, taking the death toll to 11, according to official sources.

Eight children have died here since 28 November of encephalitis, while 21 others, including six from neighbouring Andhra Pradesh, are suffering from the ailment.

The district health authorities have launched preventive measures, including fumigation.

### Japanese Encephalitis in Haryana Districts

91WD0380 Calcutta THE STATESMAN in English  
10 Dec 90 p 11

[Excerpts] Chandigarh, 9 Dec—In the month of September this year, three sisters and their only brother suddenly died in Kheri Rau Wali village in the Kaithal district of Haryana. Within a few days, many more such sudden deaths took place in the same village as well as some surrounding villages of the same district. All of them had died of the fatal disease called the Japanese fever. The doctors prefer to call it the Japanese encephalitis.

The fatal disease has gripped three districts—Kaithal, Karnal and Kurukshetra of Haryana during the past three months. During the months of September, October and November, more than 125 people have died of the Japanese fever in the three districts.

This is one of the major findings of a survey conducted by Dr. Jagdish Chander, convener of the Medical Service Centre, a Chandigarh-based voluntary medico-social group. The survey was conducted in three affected districts of Haryana.

According to the report of the group: "Most of the victims were young children. Although the rural areas were affected more by the fatal disease, the urban population also came under the fury of the disease which has created havoc in this belt of Haryana." [passage omitted]

The report also highlighted that no specific medical treatment was available to treat the patients suffering from the Japanese fever. While in hospitals, the patients developed tremors and mental impairment. The survey team also observed paralysis of any part of the body in some cases of Japanese fever. Some patients also became blind. [passage omitted]

The report points out that the exact cause of the disease is yet to be established but it is a fact that the Japanese fever is a sort of encephalitis.

The report further mentions that both the Central and the State authorities had sent medical teams to the affected areas for survey. The medical teams collected blood samples but till now, no clue about the disease has been given to the public. [passage omitted]

### Kala-azar a Problem in Bihar, West Bengal

91WD0425 Calcutta THE TELEGRAPH in English  
26 Dec 90 p 4

[Text] Patna, 25 December—Japan is likely to donate Rs 100 crores to India for the eradication of the dreaded kala azar disease which has been creating havoc in Bihar and West Bengal.

Disclosing this to newsmen, Dr. C.P. Thakur, former P and chairman of the three-member committee set up by the Centre to assess the spread of the disease, said more than two lakh people had been affected in 29 districts of Bihar and 9 districts of West Bengal. The report warned that the spread of the disease had reached such an alarming proportion that if remedial measures were not taken up immediately, it would likely be an epidemic by 1992.

The committee comprising Dr. K.K. Mallick and Mr. N.B.L. Saxena as members suggested various methods to the Centre for controlling the killer disease within four years with a budget allocation of Rs 100 crores.

They visited Darbhanga and Sahibgunj districts in Bihar and Murshidabad in West Bengal and discussed the situation with health department officials. The committee submitted its reports to the Union health ministry.

Admitting that there was total lack of an effective strategy, the report suggested that an efficient medical team should visit the areas regularly to monitor the control programme. They said kala azar could be cured and prevented with the help of adequate resources.

The committee noted that there was neither any diagnostic facility at primary health centres nor any system of followup of cases during and after treatment. Funds were also not being released by state governments in time.

### Pebrine Infection Threatens Silk Production

91WD0426 Calcutta THE STATESMAN in English  
3 Jan 91 p 4

[Text] Pebrine infection has broken out in an epidemic form in the intensive silk producing areas of Malda, affecting about 50,000 farmers involved directly in the trade and several thousand others who earn their daily wages through the cultivation of silk worm. Mr. Subash Choudhury, general secretary of the Agragami Silk Farmers' and Workers' Association, State Committee, and Mr. Debabrata Biswas, a Forward Bloc M.P., lodged

this complaint with the West Bengal Minister for Small-Scale Industries, Mr. Achintya Roy, at Writers' Buildings on Saturday.

The outbreak of the epidemic was caused by the use of contaminated seeds supplied by the State agricultural farms. Mr. Biswas and Mr. Choudhury told reporters after meeting the secretary of the department concerned that the seeds were suspected to have been supplied by the Central Silk Board and, therefore, they proposed to take up the matter with the Union Textiles Minister as soon as possible.

It was stated that about 40,000 acres in Malda district was used for sericulture which earned the State exchequer about Rs 20 crores annually. Normally, the farmers have four crops and the current one, which had been badly affected, usually yielded the biggest crop.

## IRAQ

### Hepatitis 'Major Factor' in Deaths of 2,000 Children

JN2412143990 Baghdad INA in English 1225 GMT  
24 Dec 90

[Text] Baghdad, Dec 24, INA—The Iraqi Committee Against Hepatitis on Saturday appealed to the World Health Organization (WHO) to take steps to allow medicine and medical equipment for Iraq to combat hepatitis, a disease which is spreading because of the U.S.-led economic blockade against Iraq.

In a telegram sent to the WHO, the committee said the blockade has halted imports of the equipment and special tools which are important for discovering the hepatitis G virus and also the vaccine against it.

According to the committee's officials, hepatitis was the major factor in the deaths of more than 2,000 children under five who died as a result of the embargo on children's food and medicine.

The committee called on the World Health Organization to interfere immediately to lift the food and medicine embargo and release imported medicine, vaccines, equipment, and tools to control the hepatitis virus in Iraq.

Since the enforcement of the U.S.-led economic blockade, more than 2,000 children have died in Iraqi hospitals.

Recently, Saddam Children's Hospital in Baghdad, one of few hospitals in the Middle East, registered many death cases. The cases were listed not under incurable diseases, but lack of medicine and malnutrition.

The reason for this heavy toll has been the lack of necessary medicines to treat these children.

The other factors leading to the deterioration of the health of children included the lack of sufficient quantities of milk, which caused malnutrition and the weakening of immunity to microbes.

The lack of vaccines to immunize children against various diseases was another factor.

Iraq had signed many contracts with various world countries and firms to import children's milk and medicine well before the economic blockade.

However, consignments of food, milk, and medicines have been blocked by several states which approved the inhuman blockade resolution issued by the UN Security Council under U.S. pressure.

### Cholera, Typhoid Threat Described

LD2102173191 Tehran Domestic Service in Persian  
1630 GMT 21 Feb 91

[Text] The water shortage and the spread of various diseases are seriously threatening the Iraqi people. The voice and vision correspondent in Baghdad reports:

**Correspondent:** The shortage of healthy drinking water and the use of unhygienic water, as well as the shortage of powdered milk for children, is a deathly threat to a great number of injured Iraqi infants and children. This news was announced by a hygiene official in Naynawah province, in the course of a visit by a number of foreign correspondents to a hospital in Mosul. He added: The total severance of electricity, which has caused the breakdown of the medical facilities, and also the use of unhygienic water by the people and the patients, have increased the threat of cholera and typhoid. He described the continuation of the present situation as extremely disconcerting and called on all countries and international forums to dispatch food and medical aid to Iraq, so as to prevent a tragedy.

While inspecting the bombed installations and residential units in Mosul yesterday, foreign reporters and cameramen compiled news reports on the injured in a hospital, especially the infants and the children.

### WHO Reports on Baghdad Epidemic Threat, Health Conditions

AU2302184691 Paris AFP in English 1756 GMT  
23 Feb 91

[Text] Geneva, Feb 23 (AFP)—There is a growing threat of cholera and other epidemics breaking out in Iraq. World Health Organization (WHO) officials said here Saturday on return from Baghdad.

The number of children with diarrhea and acute respiratory problems had jumped fourfold, as the war put them and their mothers under severe stress, said Ali Khogali, one of the officials who visited Iraq.

There was an urgent need to set up a network to alert doctors to possible outbreaks of disease and prevent epidemics, according to the officials.

"One of the major problems is the question of safe water and sanitation", Dr. Khogali said, adding that his group had seen people in Baghdad taking "water from the Tigris (river) and canals."

Government broadcasts on radio were advising residents to boil water, he said, "but there is a great shortage of fuel".

Meanwhile the amount of food people were getting had fallen below the minimum daily caloric intake necessary, as determined by WHO, said another member of the group, Anneke Verster.

"We have not seen any cases of malnutrition but this possibility should be borne in mind", Dr. Verster said.

Stocks of medicine had dropped to one-sixth of the level that existed before the U.N. imposed a trade embargo against Iraq because of its invasion of Kuwait.

The mission visited two hospitals, one in Baghdad and the other just outside the capital. Neither facility had electricity, water or medicines, and few patients were being admitted, the officials said.

At the Baghdad hospital, they saw children with leukemia said to be dying for lack of medicine.

They saw no wounded people and the hospitals were far from full. Most doctors were unable to get to work because of disrupted transportation, the officials said.

The group was part of a joint mission formed by WHO and the U.N. Children's Fund (UNICEF) that entered Iraq February 16 with 54 tonnes of medical equipment.

They spent a week evaluating conditions in and around the capital and were now drawing up a report recommending action to alleviate the situation.

### Medicine, Foodstuffs in Short Supply in Iraq

LD2402110991 Tehran IRNA in English 1032 GMT  
24 Feb 91

[Text] Baghdad, Feb 24 IRNA—More than 5,000 women, children and elderly people have died in various Iraqi hospitals due to shortage of medicines and medical facilities since the outbreak of the Persian Gulf war on January 17, said head of the Iraqi Red Crescent Society Ibrahim Nouri here Sunday.

Speaking to IRNA correspondent, he said that cholera and diarrhea are becoming epidemic in Iraq due to shortage of drinkable water which has prompted the public to drink Tigris River water.

Referring to Iran's pledge to donate 1,200 tons of medical supplies and foodstuff to Iraq, he said that Iranian supplies are being sent to Iraq through the International

Community of the Red Cross (ICRC). He called on Iranian officials not to spare any assistance to the Iraqi people.

Nouri said that among medicines and items which are in short supply are antibiotics, analgesic and spasmolytic drugs and serums as well as rice, sugar, wheat and tea.

Meanwhile, head of Iraqi physicians' syndicate, Dr. Razi Abbas Tikriti, told IRNA that about 17,000 physicians are active in various government, military and private hospitals throughout the country. He said that there was no need for Iranian physicians. However, he added, the Iraqi doctors can make use of experience and expertise of the Iranian physicians for which he said the Iraqi nation will be grateful.

### Cholera, Typhoid Epidemics Threaten Iraq

NC2802093591 Paris AFP in English 0844 GMT  
28 Feb 91

[Article by Jacques Charmelot]

[Text] Baghdad, Feb 28 (AFP)—Cholera and typhoid epidemics are threatening Baghdad, as residents here grapple with an acute shortage of clean water, officials have said.

They have also reported deaths linked to both diseases although they could not provide accurate tolls.

"Thousands of people are already showing the first symptoms of cholera, namely diarrhea and vomiting as well as fever," Doctor Ibrahim al-Nuri, director of the Iraqi Red Crescent, told Agence France-Presse.

"Many people will die if nothing is done," he said.

He also said that some deaths had been reported in various regions of Iraq although he could not provide an exact toll, blaming that on the disruption of communications as a result of allied bombardments.

The problem, Dr. al-Nuri said, was rapidly increasing as water shortages became more acute with large sections of the population forced to use "water unfit for consumption" for their daily needs.

Water pumping stations stopped functioning with the start of the Gulf war on January 17 and some, officials here said, were deliberately bombed by the allied forces.

But most of these units stopped working when power stations—four of which have been toured by Western correspondents here—feeding them were bombed in allied air attacks.

"The minimum of clean water needed per day per person in the Baghdad region in winter is 40 liters," explained a senior health ministry official in charge of preventive medicine and environment protection.

"Today, in neighborhoods where water can still be distributed, a maximum of 10 liters is handed out per day per individual," said Doctor 'Abd-al-Amir al-Thamiri.

But in the many areas and communities where running water is no longer existent, women and children have often been seen by reporters filling pots and pans with rain water that they take from pot holes or any other way they can.

Another common sight is the long lines that form as early as dawn outside water distribution centers.

Even at the Al-Rashid Hotel, where foreign correspondents have set up their headquarters, guests are entitled to one hour of running water a day and even then they are advised to dilute chlorine capsules in it before consuming it.

Dr. al-Thamiri said he heard of several cases of typhoid-related deaths. He could not provide a toll nor could he confirm reports of cholera-linked deaths.

But both he and Dr. al-Nuri, in talks attended by an escort from the Iraqi information ministry, agreed that the situation was "rapidly deteriorating" and that it carried the seeds of all-out epidemics.

## ISRAEL

### Near Epidemic of Measles Kills 6, Infects Dozens in South

TA0602224791 Jerusalem Voice of Israel and IDF Radio Networks in Hebrew 2200 GMT 6 Feb 91

[Text] The number of people sick with measles in southern Israel is growing and approaching the dimensions of a virtual epidemic. That statement was made by Dr. Hayim Re'uveni, the director of Soroka Hospital, to our correspondent Nisim Qaynan. Re'uveni asserted that the hospital was incapable of coping with such an epidemic. It was earlier reported that six children had died of measles in Bedouin settlements in the south. [Jerusalem Israel Television Network in Hebrew at 2245 GMT reported that five children and one elderly woman had died.] Our correspondent Rina Matzliah reported that over 100 Bedouin, most of them children, were discovered to be suffering from measles. Of these 25 children were under one year of age and, therefore, not inoculated. Measles has also struck the Jewish population in the south, and dozens of Jews developed the disease, especially in Beersheba.

Dr. Vera Adler, director of the public health services, said that the inoculation policies of the Bedouin and Jewish populations were different.

## MAURITANIA

### Locust Eradication Program Statistics Listed

91AA0179A Nouakchott CHAAB in French  
22 Nov 90 p 6

[Text] As crops mature, the locust threat is seen as diminishing somewhat. That was the overall picture to emerge from the weekly meeting of the anti-Acridae coordinating committee Tuesday, which was chaired by Tahara Galledou, director of the Office of Plant Protection at the Ministry of Rural Development.

### I. Meteorological Trends and Agriculture

#### 1.1 The Weather Picture

The weather this week was dominated by the presence a high-pressure area over the Maghreb and northern Mauritania. This high-pressure area directed a strong to moderate easterly flow over the country, with hazy visibility aggravated by sand storms, except in the Dakhlet Nouadhibou region.

Temperatures are falling, and no precipitation was recorded during the week.

#### 1.2 Crops and Pasture Lands

Grassy plant cover is completely dry with the exception of a few areas inside basins, along drainage lines, and in floodplains or adjacent to dams. Woody plant cover remains fairly green.

Rain-fed crops are nearing the end of harvest. Floodland crops and crops adjacent to dams have reached various stages ranging from readiness for picking to advanced ripeness.

In rice-growing areas, rice crops have reached various phenological stages ranging from flowering to complete maturity. This is the case in Fount Gleita and Bodhe where harvesting is already under way. Truck farming in all the wilayas [administrative districts] is in various stages: sowing, transplanting, picking.

### II. Acridae Presence

#### 2.1 Desert Locusts

The second phase of the Maghreb Intervention Force's locust watch ended on 14 November 1990. Only a few isolated individual specimens were reported:

- One winged female, gray in color, was captured on 9 November in Zirett Lemhar located at latitude 18 degrees 25 minutes north and longitude 12 degrees 32 minutes west (Tagant region).
- Two winged individuals were observed and two female specimens of a grayish-straw yellow color were captured on 10 November at Magta Tchera located at latitude 16 degrees 39 minutes north and longitude 11 degrees 4 minutes west (Assaba region).

## 2.2 Grasshoppers

Grasshopper populations are diminishing very progressively thanks to increasingly unfavorable ecological conditions (lower temperatures and withering of annual vegetation) and treatment efforts. The total area infested in Mauritania is no greater than 12,000 hectares.

The Guidimaka region: KAN, DAX, and aiolopus have infested 3,000 hectares in densities ranging from three to five specimens per square meter in the floodlands. Damage of 2 to 6 percent was noted on young sprouts.

The Assaba region: 850 hectares are infested at a density of seven to eight specimens per square meter.

The Brakna region: 2,015 hectares are infested at a density of four to five specimens per square meter. Damage of 5 to 7 percent was noted on rice plants.

The Trarza region: 5,481 hectares are infested at a density of two to four specimens per square meter on irrigated cropland and two to six specimens per square meter on fallow land.

We note that several swarms of Anacridium (tree locusts) were reported in the Guidimaka, Hodh Charghi, and Gorgol regions. Damage to fruit trees of 5 to 15 percent has been reported.

## III. Other Agricultural Pests

### 3.3 Grain-eating Birds

Crops are having to withstand strong attacks from birds because of diminishing rangeland areas (which normally provide wild seed to the birds). This situation is faced by all the country's agro-pastoral wilaya't in which the crews of the PV [expansion not given] have stepped up their efforts using both the traditional method and explosives. These operations have yielded good results in Trarza and Brakna.

## IV. Land Area Treated for Grasshoppers

In Guidimaka, 310 hectares were treated by the PV and 740 were treated by the CV [expansion not given], for a total of 1,050 hectares.

In Gorgol, 80 hectares were treated by the CV.

In Assaba, 58 hectares were treated by the CV.

In Trarza, 519.2 hectares were treated by the VC [expansion not given].

The total for the week is 1,707.2 hectares treated, which brings the overall cumulative total at this date to 150,233 hectares, 100,542 of which were treated by aerial spraying.

## V. Pesticide Stocks (see tables 2 and 3)

Table 1. Grasshopper Treatment Efforts as of November 17 1990

	Ground Applications					Aerial Applications				
	Cum. Total	PV	Farmers	Army	Total	Cum. Total	Cum. Total	Land Area	Cum. Total	Total
Wilaya	11/10/90	Between 11/11/90-17/11/90					11/17/90	11/10/90	11/ 11-17/90	11/17/90
H. Charghi	3,300					3,300				3,300
H. Gharbi	8,402					8,402				8,402
Assaba	9,838		58		58	9,896				9,896
Guidimaka	15,145	310	740		1,050	16,195	88,202	88,202		104,397
Gorgol	3,415		80		80	3,495	12,340		12,340	15,835
Brakna	1,050					1,050				1,050
Trarza	6,133.8		519.2		519.2	6,653				6,653
Tagant										
Adrar	700					700				700
Inchiri										
District/ Nouakchott										
Total	47,983.8	310	1,397.2		1,707.2	49,691	100,542		100,542	150,233

**Table 2. Liquid Pesticide Stock Levels as of 10/27/90  
(Pesticide (in liters))**

Wilaya	Feni 50%	Feni 96%	Feni CE	Mal 25%	Mal 95%	Mal 96%	Devp 96%	Diazin	Lindane	Metaphos	Decis ULV	Dedis CE	Karate	Total
H. Charghi	2,700				4,100			14,200	880	125			22,005	
H. Gharbi	2,400								9,020	6,795	1,000	7,050		26,215
Assaba	10,565					21,800		700	1800	8,836	2,525	51		46,277
Guidimaka												2,200		2,200
Gorgol	680		1,200		4,200	450					3,850			10,380
Brakna	2,350				8,200	6,150			400		4,100			21,200
Trarza	12,500	3,000	3,311		2,400			200			6,965	1,939.5	4,500	34,815.5
Inchiri	13,000		2,400	400							90			15,890
Adrar	9,600			5,800			21,600							37,000
Tagant	4,300			16,082									20,382	
BMB/Nouakchott														
Total	58,095	3,000	6,911	22,282	18,900	28,400	21,600	15,100	12,100	15,756	18,530	11,240.5	4,500	236,364.5

**Table 3. Other Pesticide Stocks (in liters)**

Wilaya	
Tarza 400	Feni 100
Inchiri 3,600	Feni 100
Guidimaka 3,000	Sumicombi
H. Chargui 1980	NOMOLT

[table as published]

## VI. Forecasts and Current Activities

### 6.1 Desert Locust

The second phase of the Maghreb Intervention Force's locust watch ended of 14 November, and the crews have returned to their station in Aioun. With regard to the desert locust, the situation is calm.

### 6.2 Grasshoppers

Large infestations have been treated and surveillance will be kept up to detect any change in the situation. Land crews are continuing to apply pesticides to eliminate the last pockets of infestation in southern agro-astoral areas.

### 6.3 Grain-eating Birds

The use of explosives and traditional means to combat grain-eating birds is being pursued in all the southern wilaya'at. The anti-avian methods available at Agricultural Inspection offices will be redeployed in the wilaya'at most threatened by birds, which are Brakna and Assaba.

**Belorussia Combats Genetic Effects of Chernobyl**

*LD0402140791 Moscow World Service in English  
1200 GMT 4 Feb 91*

[Text] The parliament of Belorussia has endorsed a national prophylaxis program to prevent the genetical adverse effects of the Chernobyl catastrophe. The program was devized in the wake of the increased number of infants with inborn and hereditary diseases, including cancer and cardiovascular illnesses.

**Radiation and Chemical Sabotage Against Georgia Claimed**

*AU0602173191 Tbilisi Domestic Service in Russian  
1530 GMT 6 Feb 91*

[Text] The first session of the Temporary Commission for the Investigation of the Consequences of the Radiation and Chemical Sabotage Against the Republic has completed its work. The commission was created by the Georgian Supreme Soviet Subcommission for Questions of Public Health and Social Protection. As reported to the participants of the session by Maugli [indistinct] Chkhikhvadze [indistinct], candidate of medical sciences, member of the management of the Iliya the Just All-Georgian Society, foodstuffs contaminated with radiation have been delivered to Georgia since 1986 from various oblasts of the Ukraine, Belorussia, and the Russian Soviet Federated Socialist Republic that had been affected by the Chernobyl catastrophe.

As a result, the incidence of acute leukemia in Georgia has doubled since 1986; several cases of spontaneous balding in children have been reported.

The second question discussed concerned the situation at the republican rehabilitation center for children where a radiation background higher than normal was detected.

Functions were distributed among the members of the commission. The sanitary and epidemiological center [stantsiya] will be in charge of making decisions on the quality of the foodstuffs that are being delivered to the republic.

**Chukotka Radar Stations Pose Health Hazard**

*LD1402122991 Moscow Central Television First Program Network in Russian 0900 GMT 14 Feb 91*

[From the "Television News Service" program, presented by Tatyana Mitkova]

[Text] **Unidentified correspondent:** These radar installations made their appearance extremely close to the coastal settlements in Chukotka's Beringovskiy rayon long ago, at a time when the all-powerful military department did not particularly bother to seek out a location for its installations and certainly had no interest in the opinion of the population that it was preparing to reliably defend. [video shows middle-distance views of two or three tracking installations in a snowy haze, interspersed with views of nearby civilian life]

Years passed, and it turned out that this same population—in this case, the inhabitants of settlements—was receiving powerful doses of electromagnetic irradiation from the operating radar installations. According to an expedition from the Far Eastern University, which carried out an investigation here, the maximum permitted norm for this irradiation was being exceeded 7-9 times over. Scientists precisely connect this with the sharp increase in oncological disorders in the rayon in recent years. Naturally, people did not wish to remain such hostages to national defense.

**Unidentified speaker:** The commission has ended its work, clearly acknowledging that installations that affect the health of the population of an inhabited locality must be resized.

**Correspondent:** Incidentally, that will not happen immediately. For the time being, it has been decided that the radar installations will operate in a mode that is harmless to people.

**Reports on Donetsk Bubonic Plague Case Unconfirmed**

*LD2602171891 Moscow TASS International Service in Russian 1555 GMT 26 Feb 91*

[Article by UKRINFORM-TASS correspondent Nikolay Stolyarov]

[Text] Donetsk, 26 Feb (TASS)—Soviet media reports on the discovery of a patient suffering from bubonic plague in Donetsk (Ukraine) have not been confirmed.

"Doctors in Donetsk certainly did suspect an affliction with bubonic plague," said Viktor Trach, state physician of Donetsk oblast. "The patient who was found, a resident of Azerbaijan, was taken to the hospital promptly and has been given the necessary medical assistance."

Members of the antiepidemic emergency commission at 1600 today announced that the bubonic plague diagnosis has not been confirmed.

## WEST EUROPE

## CANADA

**Six Cases of TSLS Group A Streptococcus**

*91WE0162 Toronto THE GLOBE AND MAIL  
in English 14 Dec 90 pp A1, A6*

[Article by Karen Feig-Weisbrod]

[Excerpts] When Susan Goldberg came down with a slight fever, mild cramps and diarrhea last month, she thought she had the flu.

Three days later, the 30-year-old mother of two was taken to the hospital semi-conscious. Within hours, she was dead.

Doctors at first blamed meningitis, but were startled by laboratory results that instead found Group A streptococcus, a common bacterium that causes strep throat.

Her death—like that of Muppet creator Jim Henson—is now attributed to a new and deadly strain of Group A streptococcus that causes a disease doctors are calling toxic shock-like syndrome (TSLS), named after the syndrome that developed in women who used superabsorbent tampons.

It can start with a sore throat or flu-like symptoms and then progress quickly to a high fever, drop in blood pressure and a loss of circulation. In up to 30 percent of the known cases, the result has been death.

The bacterium has shown up in at least four cases this year in Toronto-area hospitals and in two cases outside of Toronto, including that of a 55-year-old man who died in Sarnia two weeks ago. Cases have also been reported in the United States, England, Scandinavia, Germany, Australia and New Zealand.

What is unsettling is how quickly the disease can kill an otherwise healthy person.

Dr. Donald Low, chief of microbiology at Mount Sinai Hospital in Toronto, said that in one case last January, a man who had fallen on ice went to a Toronto hospital complaining of a sore back. "He died within 12 hours."

Dr. Low says he thinks that as awareness of TSLS increases, "there will be more cases recognized and reported."

Dr. Low is heading a team of infectious-disease specialists from the University of Toronto who have started looking at cases locally and across Ontario. They plan to expand the study across the country and hope to release a preliminary report to physicians within a few weeks.

The new, hardier strep has also been blamed for a resurgence in the number of rheumatic fever cases in children in the United States. Doctors at the Hospital for Sick Children in Toronto say there is no evidence of such a rise in Canada, but they are monitoring the situation and aggressively treating any cases involving Group A strep.

**Rabies Spreading From Eastern Ontario Into Quebec**

*91WE0160 Ottawa THE OTTAWA CITIZEN  
in English 21 Nov 90 p B3*

[Article by Carol Doran]

[Excerpt] Pembroke—Pet owners are being urged to keep animals under strict control during an epidemic of rabies that has spread from rural Renfrew County into urban areas and across the Ottawa River into the Outaouais.

A total of 134 cases have been reported so far this year in the county, which has the highest incidence of the disease in Eastern Ontario.

But the outbreak is even worse in Pontiac and Gatineau counties in the Outaouais with 276 cases so far this year.

Dr. Benoit Paquette, a veterinarian with Agriculture Canada, said the Outaouais outbreak spread from Renfrew County.

"It's pretty bad. The disease is now on the margins of urban areas in Aylmer and Hull," he said.

Dr. Bob Georgeson, another Agriculture Canada veterinarian, said the disease is moving from foxes, the principal carriers, to skunks. This could create more of a hazard for humans because skunks are prevalent in urban areas, he said.

Georgeson predicted that rabies in the skunk population probably won't result in an extended outbreak in the spring because the species hibernates in dens and would tend to infect each other, then die.

Meanwhile veterinary and health officials in Renfrew County stepped up a campaign to urge vaccination of pets against rabies after a rabid fox attacked a dog on Somerset Street in Pembroke earlier this month.

A total of 87 people in the county who have come in contact with rabid animals or other animals bitten by them, have required the six-needle inoculation treatment used in rabies cases.

**Shellfish Harvesting Bans in British Columbia**

*91WE0159 Vancouver THE SUN in English  
29 Nov 90 pp A1, A12*

[Article by Glenn Bohn]

[Excerpt] Harvesting bans around six B.C. pulp mills are being vastly expanded following the discovery of more dioxin-contaminated shellfish, the federal government announced today.

The expansion of fishing and harvesting restrictions increases the areas closed around each mill by as much as five times in size.

Affected are waters around:

- Fletcher Challenge's Crofton mill near Duncan.
- The Fletcher Challenge mill near Campbell River.
- The MacMillan Bloedel mill at Powell River on the Sunshine Coast.
- The MacMillan Bloedel mill near Nanaimo.
- The Canadian Forest Products mill near Gold River.
- The Eurocan mill near Kitimat.

The government also advised people not to eat the livers of bottomfish—such as rockfish, cod and flatfish—which are caught near mills.

However, it declared muscle tissues or fillets of all coastal bottomfish and finfish species, such as salmon, "pose no concern to human health."

On the advice of Health and Welfare Canada, which assesses the health effects of eating dioxin-contaminated seafoods over a lifetime, hundreds of kilometers of coastlines now have restrictions on prawns, crabs, shrimp, clams, mussels and oysters.

There are also existing health advisories for whitefish, squaw fish and suckers near some Interior B.C. pulp mills.

In lab animals, dioxins have caused tumors, birth defects and reproductive failures.

The federal government's newest dioxin measurements—based on samples taken last winter and tested this spring—were made public in response to an Access to Information request one month ago by The Vancouver Sun.

Canada's first dioxin-triggered closure was in Howe Sound, just eight days after the November 1988 federal election.

Environment Canada officials say this year's testing program in B.C. cost about \$1 million, but scientists don't yet know whether dioxin levels in seafoods are decreasing, or when the bans will be lifted.

"We're talking about recovery in years, not months," said Mak Ito, the federal department's regional director of pollution abatement and compliance.

Both federal and provincial environment ministers have promised laws to eliminate dioxins from pulp mills, but neither government has enacted any.

Ito said 11 of the 14 mills in B.C. known to be generating dioxins have installed expensive new equipment and stopped using chlorine to comply with proposed federal regulations. The three exceptions are pulp mills at Port Alberni, Powell River and Nanaimo.

Chlorine is used to bleach brown pulp into white paper. Both industry and government studies have shown it creates dioxins.

The three mills still using chlorine are owned by MacMillan Bloedel, B.C.'s largest forest corporation, which reported \$246 million in profits last year.

## UNITED KINGDOM

### Carrot Root Disease Spreads to Sugar Beet

91WE0215A Leeds YORKSHIRE POST in English  
29 Dec 90 p 8

[Article: "Violet Could Turn Beet Growers Blue"]

[Excerpt] A disease called Violet Root Rot, which normally attacks carrot crops is beginning to damage sugar beet, and is spreading in parts of North Yorkshire.

It is a disease which chiefly affects other root crops, carrots being the most susceptible and it is comparatively new in sugar beet. But it has tended to become an increasing problem in the East Anglian crop and in other eastern counties where sugar beet is extensively grown.

It can be present in most soil types and leaves violet coloured patches and strands of fungi on the outside of roots. The disease life cycle can carry over for a considerable time in the soil. It can even affect certain weeds such as nettles and docks.

One of the most serious implications is that it can easily be mistaken for frost damage to sugar beet. This can be an expensive mistake as frost damaged beet is rejected at the factory as it impairs the processing.

Only in very extreme cases of Violet Root Rot, is there major damage which could cause rejection.

Mr. Eric Hutchinson, KW Agriculture's arable specialist manager, who has identified the problem in North Yorkshire, says it is becoming more prevalent among sugar beet and potato crops in intensive root rotations, and should be considered as a warning for the county's arable farmers.

[Passage omitted]